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# Salient egalitarian norms moderate activation of out-group approach and avoidance

Natalie A. Wyer<sup>1</sup>

## Abstract

Recent research suggests that interaction-appropriate behavior may be automatically triggered by exposure to an out-group cue. Two experiments investigated the role of prejudice and salient egalitarian norms in determining the activation of two fundamental behavioral responses: approach and avoidance. The activation of approach and avoidance was investigated as a function of negative attitudes towards homosexuals (Experiment 1) and African-Caribbeans (Experiment 2). Results indicated that avoidance was automatically activated in response to out-group labels among participants with prejudiced attitudes (Experiments 1 and 2) whereas approach was less activated among prejudiced participants (Experiment 2). The former effect, however, was significantly diminished when egalitarian norms have been made temporarily salient.

## Keywords

automatic processes, egalitarian norms, prejudice

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## Automatic activation of approach and avoidance

The decision to approach or avoid another person is a fundamental step in social interaction. Before more elaborate interaction goals (e.g., impression management, competition, discrimination, etc.) can begin to influence social behavior, one must make the decision to enter into an interaction in the first place. Thus, in order to identify the factors that influence the quality of social interactions, it is first important to identify those that influence approach and avoidance responses to others. Approach and avoidance tendencies may be particularly important in the context of intergroup interactions. Indeed, the reluctance of conflicting groups to engage in

social interaction has often been assumed to be an important barrier to improving intergroup relations (see Pettigrew & Tropp, 2006). The aim of this article is to explore the conditions under which approach and avoidance responses are automatically triggered by exposure to out-group cues.

Recent years have seen a surge in attention to automatic effects of exposure to out-group cues (including faces of group members, group labels,

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and/or words associated with group stereotypes). Research has demonstrated that both cognitive (stereotypes) and evaluative (prejudice) associations are automatically activated upon encountering out-group cues (e.g., Devine, 1989; Wittenbrink, Judd, & Park, 1997). Of particular interest of late is the extent to which activating out-group representations influences behavior. Attention in this domain has focused primarily on two types of behavioral effects: (1) assimilation (in which a perceiver's behavior conforms to the out-group stereotype); and (2) contrast (in which a perceiver's behavior directly opposes the out-group stereotype). Seminal work by Bargh, Chen, and Burrows (1996) established that individuals primed with out-group stereotypes tended to behave as if those stereotypes applied to them (i.e., they assimilated their behavior to the primed stereotype). Since publication of the Bargh et al. (1996) paper, subsequent research has yielded similar automatic effects on behavior, while other studies have reported opposite (i.e., contrast) effects (e.g., Dijksterhuis & van Knippenberg, 1998; Dijksterhuis et al., 1998). To date, the majority of that research has focused on identifying conditions in which behavioral assimilation versus behavioral contrast is likely to occur.

### *Automatic effects on interaction-appropriate behavior*

This emphasis has, until recently, neglected a third possibility of how behavior may be influenced by exposure to out-group cues—specifically, that behavior appropriate to *interacting* with the out-group may be produced. This possibility has been independently suggested by Jonas and Sassenberg (2006) and by Cesario, Plaks, and Higgins (2006).

Jonas and Sassenberg (2006) proposed that situation models, containing information about typical interaction behaviors, are activated when an out-group cue is encountered. Their conceptualization draws on Hommel and colleagues' theory of event coding (Hommel, Musseler, Aschersleben, & Prinz, 2001) as well as Zwaan and Radvansky's (1998; see also R. S. Wyer, 2004) framework to posit that situation models are constructed through either direct experience or second-hand transmission

of information. Thus, these models develop as learned associations between a social category and a dominant response behavior—that is, the behaviors that one typically engages in when interacting with a member of the group. Consistent with this idea, the authors found that participants were facilitated in classifying words that identified behavioral responses associated with a group under conditions where the group label had been primed (for example, priming the social category “flood victims” facilitated responses to behavior words “help” and “donate”). Importantly, they also found parallel effects on participants' actual behavior.

This research introduces the possibility that activating an out-group representation may have consequences for behavior that extend beyond assimilation and contrast, and that those consequences may be functional in that they may facilitate appropriate social interaction. However, one question not directly addressed by Jonas and Sassenberg (2006) is whether individuals who vary in their personal beliefs or attitudes towards an out-group might activate different situation models when primed with the group label. Moreover, they do not address the possibility that a single individual might have multiple models of the same situation that vary depending on contextual cues.

An alternative conceptualization of how appropriate interaction behavior might be facilitated by exposure to out-group primes is offered by Cesario et al. (2006), who draw on Bargh's (1990) automatic model to posit that activating out-group representations automatically triggers goals or motives associated with interacting with the group. These motives, in turn, produce behavior consistent with achieving the desired interaction. This perspective differs from that of Jonas and Sassenberg (2006) in two ways. First, under Cesario et al.'s framework, interaction goals mediate the effects of an out-group prime on behavior. Second, behavioral responses are conceived as reflecting the perceiver's *desired* interaction with the out-group rather than his or her model of a *typical* interaction. Thus, Cesario et al.'s (2006) perspective makes clear predictions that individual differences in perceivers' personal attitudes or beliefs about an out-group may influence the behavioral response

following out-group primes, because individuals who hold positive evaluations of a group are likely to have quite different goals when it comes to interacting with the group than those with more negative attitudes. In support of their perspective, Cesario et al. demonstrated that participants' attitudes towards a primed out-group did, in fact, determine their behavioral response (see also Dovidio, Kawakami, & Gaertner, 2002). After being primed with an out-group (e.g., the elderly), participants with favorable attitudes towards the group behaved in a manner that would facilitate their interaction with the group, whereas those with negative attitudes behaved in ways that would help them to avoid such interactions.

Recent research on the automatic activation of approach and avoidance responses provides converging evidence that such responses may be linked with one's attitudes. For example, Neumann, Hulsenbeck, and Seibt (2004; see also Seibt, Neumann, Nussinson, & Strack, 2008) reported that individuals with negative implicit attitudes towards individuals with AIDS were faster to make motor responses consistent with avoidance than were those with relatively positive implicit attitudes (see also Chen & Bargh, 1999). Interestingly, participants' explicit attitudes did not predict their behavioral responses. Similarly Paladino and Castelli (2008) reported that out-group members were more easily categorized using a motor response consistent with avoidance. These studies, taken together, suggest that out-groups (and particularly those towards whom one holds prejudiced attitudes) are often strongly associated with avoidance responses.

### *Chronic and transient influences on behavioral responses*

Cesario et al. (2006) established that out-group prejudice is an important determinant of the specific motives (and consequent behaviors) that are activated in response to out-group primes. This finding is consistent with other research suggesting that individual differences in personal beliefs about a group may influence automatic processes relating to the group. For example, Kawakami,

Dion, and Dovidio (1998) reported that while highly prejudiced individuals showed evidence of automatic stereotype activation, lower prejudiced participants did not (see also Wittenbrink et al., 1997; cf. Devine, 1989). In addition, Moskowitz and colleagues (Moskowitz, Gollwitzer, Wasel, & Schaal, 1999; Moskowitz, Salomon, & Taylor, 2000) have highlighted the importance of chronic egalitarian goals in disrupting the automatic activation of stereotypes. Such results, taken together with those reported by Cesario et al. (2006), suggest that chronic sources of motivation may also influence automatic behavioral effects of out-group priming.

Beyond these chronic sources, other factors may produce relatively short-term shifts in response tendencies (see Blair, 2002, for a review). In particular, situational constraints and salient social norms have been found to influence various automatic responses to out-group cues. For example, Lowery, Hardin, and Sinclair (2001) reported that participants' implicit racial attitudes were influenced by the race of the experimenter who measured those attitudes, suggesting that automatic evaluations are susceptible to cues that create a demand for non-prejudiced responses. In other research, N. A. Wyer (2003) reported that priming participants with egalitarian norms reduced the extent to which they automatically activated stereotypes in response to out-group cues. Such findings suggest the possibility that automatic behavioral responses may be influenced by similar factors.

Indeed, recent research by Zogmeister, Arcuri, Castelli, and Smith (2008) suggests that implicit in-group favoritism can be reduced by making egalitarian norms temporarily salient. In that research, Zogmeister et al. primed equality or loyalty using a scrambled sentence task, and then measured implicit in-group bias (using the Implicit Association Test and the Go/No-Go Task) and avoidance behavior directed towards the out-group. Participants primed with equality displayed more favorable responses to an out-group than did those primed with loyalty. Interestingly, implicit attitudes and avoidance behavior were not significantly correlated, a finding interpreted by Zogmeister et al. as

suggesting that while attitudes and behavior were both influenced by salient egalitarian norms, they reflect independent aspects of intergroup bias. It is worth noting, however, that initial attitudes towards the out-group were not assessed in Zogmeister et al.'s research, thus it is not possible to draw strong conclusions about the relationships among prejudiced attitudes, egalitarian norms, and avoidance behavior. As discussed in the following paragraphs, one interesting possibility is that pre-existing attitudes and temporarily salient norms may interact to influence behavior.

Given that individuals may be influenced both by chronic cues for how to interact with an out-group (e.g., their personal attitudes towards the group) as well as more transient cues (e.g., salient egalitarian norms), how are conflicts between these cues derived from different sources resolved? Early research by Bargh and colleagues (Bargh, Bond, Lombardi, & Tota, 1986) suggests that chronic and temporary sources of accessibility are additive—hence, conflicting goals might be expected to cancel each other out. However, more recent work by Shah and associates (Shah, 2005; Shah, Friedman, & Kruglanski, 2002; Shah & Kruglanski, 2002) indicates that incompatible goals are unlikely to be simultaneously accessible. In their work, they have demonstrated that given a variety of potential goals to pursue, individuals identify a focal goal which becomes activated (along with associated strategies for achieving it). When a focal goal is activated, alternative goals are actively inhibited so that the potential for interference with the primary goal is minimized (a process referred to as “goal shielding”; Shah et al., 2002). Indeed, in cases where alternative goals do become accessible, people's ability to pursue the focal goal is disrupted (Shah & Kruglanski, 2002). Hence, when social interaction goals stemming from different sources come into conflict, one goal is likely to take on the role of a focal goal. The focal goal will thus become activated, while other alternative goals will be inhibited. In the case of intergroup interaction goals, the extent to which one is influenced more by goals stemming from personal attitudes versus salient social norms is open to speculation.

## Overview of current research

The present studies were designed to assess the influence of chronic and transient cues on the automatic activation of approach and avoidance concepts in relation to an out-group. As stated earlier, approach and avoidance tendencies are fundamental to all social interaction. Moreover, avoidance behavior has often been linked to out-group prejudice, one chronic source of interaction motivation (e.g., Amodio & Devine, 2006; Green, 1972; Stangor, Sullivan, & Ford, 1991). Thus, it is predicted that avoidance will be automatically activated through exposure to out-group primes for highly prejudiced individuals. Following Shah et al.'s (2002) goal-shielding model, however, it is further expected that the introduction of a transient, but incompatible, cue (in the form of salient egalitarian norms) should disrupt the relationship between prejudice and automatic activation of avoidance.

The current research utilizes a paradigm similar to that employed in Jonas and Sassenberg's (2006) experiments. Participants in two experiments were exposed to either an egalitarian norm or control norm prime prior to completing a measure of approach and avoidance activation—i.e., a primed lexical decision task. The lexical decision task consisted of a number of trials on which participants were briefly exposed to a group label (“gay” in Experiment 1 and “black” in Experiment 2) and were asked to judge whether each in a series of stimuli was or was not a real English word. Stimuli included words related to “approach” and “avoid” behaviors. Although response facilitation is not a direct measure of interaction behavior, Jonas and Sassenberg (2006) reported convergent evidence from studies using a facilitation paradigm and those using an actual behavioral measure. Furthermore, given that semantic priming of behavioral goals has been shown to produce the corresponding behavior (e.g., Bargh, Gollwitzer, Lee-Chai, Barndollar, & Trötschel, 2001), there appears to be a close correspondence between activation of a behavioral representation and execution of a behavioral response.

## Experiment 1

Negative attitudes towards homosexuals are often accompanied by a desire to avoid homosexual individuals (Pryor, Reeder, Yeadon, & Hesson McInnis, 2004). Hence, homosexuals were selected as the target group in Experiment 1. After completing a measure of their attitudes towards homosexuals, participants were assigned to write a persuasive essay in favor of either egalitarian or pro-education (control) ideals. This task was intended to make egalitarian norms salient for some participants, and was modeled after one employed by N. A. Wyer (2003) to activate egalitarian norms. After the essay-writing task, participants completed the measure of approach and avoidance activation. It was expected that, under control conditions, prejudice towards homosexuals would positively predict facilitation to avoidance words and negatively predict facilitation to approach words. It was further anticipated that the relationship between prejudice and avoidance activation would be attenuated under conditions where egalitarian norms were salient.

### Method

**Participants** Participants were 40 undergraduate students (26 females) at the University of Plymouth who took part in this and an unrelated experiment in exchange for £3 (approximately \$6). Participants were tested individually or in groups of two to four.

**Design** The experiment employed a  $2 \times 2$  mixed-participants design in which target word type (approach or avoid) varied within-participants and norm (egalitarian or control) was manipulated between-participants. Prejudice towards homosexuals (as measured by the Heterosexuals' Attitudes towards Homosexuals (HATH) scale; Larsen, Reed, & Hoffman, 1980) was also measured as a continuous predictor variable.

**Materials and procedure** A female experimenter explained to participants that they would be taking part in a series of unrelated tasks. Each task was presented via Pentium III computers using E Prime software, which also recorded participants' responses and response times (RTs). The first task was described as a "Social Attitudes Questionnaire". Participants were informed that researchers were interested in students' attitudes towards a number of social groups, and that they had been randomly assigned to the "homosexuals" condition, and so they would be asked about their attitudes towards homosexuals. Participants were then presented with the 21-item HATH scale which required them to rate their agreement with a series of statements on a 5-point scale (1 = strongly disagree to 5 = strongly agree). Participants then took part in an unrelated experiment for 10–15 minutes.

Next, participants were introduced to a study on "people's ability to generate persuasive arguments". Participants were informed that they were to write an essay in support of a statement that would be provided to them. Participants were assigned to one of two norm conditions. Participants in the egalitarian norm condition were presented with the statement "All people are equal; therefore they should be treated the same way". Those in the control norm condition were presented with the statement "A strong educational background is necessary for success in life". Participants were given five minutes in which to write a persuasive essay in favor of the statement.

After the norm manipulation, participants were introduced to a "lexical judgement task". Participants were presented with a series of stimuli, and were required to indicate (as quickly and accurately as possible) whether each stimulus was or was not a real English word. Participants completed 48 trials, half of which involved real words and half of which involved pronounceable nonsense words. Two types of target words were used: approach words included *approach*, *contact*, *near*, *help*, *assist*, and *support* and avoidance words included *avoid*, *flee*, *escape*, *shun*, *reject*, and *refuse*. Both approach and avoidance words (and an equivalent number of nonsense words) were



presented twice. Prior to one of the two presentations, the prime word *gay* was presented followed by a mask (*ggg*). Prior to the other presentation, only the mask (*ggg*) was presented. The order of prime-target combinations was randomized for each participant.

Each trial consisted of the following sequence: a fixation cross appeared at the center of the screen for 1000ms, after which a prime ("gay" or "ggg") was presented for 30ms immediately followed by a mask for 100ms. Finally, a target (avoidance word, approach word, or non-word) appeared and remained on the screen until the participant responded by pressing the L key for "yes" or the D key for "no". The amount of time required by participants to make each response was recorded.

## Results<sup>1</sup>

**HATH scores** The HATH scale was highly reliable ( $\alpha = .93$ ); thus after reverse-scoring on negatively worded items, participants' responses were averaged into a single HATH score. The theoretical range of HATH scores is from 1 to 5, with higher scores indicating more negative attitudes towards homosexuals. The observed range in this experiment was 2.90 to 4.95 ( $M = 4.16$ ,  $s = 0.64$ ).<sup>2</sup>

**Approach and avoidance activation** Approach and avoidance activation were assessed by comparing participants' RTs to trials involving approach and avoidance words following gay primes to those following control primes. Preparation of the data involved several steps. First, all RTs corresponding to incorrect responses were removed (89 errors, 9.31% of target word trials). Second, outliers were calculated as any RT that fell more than three standard deviations above the average RT for correct responses to target words. Using this criterion, RTs over 1700ms were removed (18 outliers, 2.1% of correct responses). Next, average RTs were computed for four types of trials: approach words following gay primes, approach words following

control primes, avoidance words following gay primes, and avoidance words following control primes. Finally, two facilitation scores were computed. Approach facilitation scores were computed by subtracting the average RT to approach words following gay primes from the average RT to the same words following control primes. Likewise, avoidance facilitation scores were computed by subtracting the average RT to avoidance words following gay primes from the average RT to the same words following control primes.

Facilitation scores were analyzed using a two-way mixed-model Analysis of Covariance (ANCOVA) in which target type (approach or avoidance) was entered as a repeated-measure variable, norm (egalitarian or control) was entered as a between-participants variable, and HATH scores were entered as a covariate. A model was specified in which the covariate (HATH scores) was allowed to interact with norm to predict facilitation to both types of target. The ANCOVA revealed a significant main effect of target type,  $F(1, 36) = 4.88$ ,  $p = .03$ , such that participants showed greater facilitation to respond to avoidance words ( $M = 18.64$ ms,  $s = 68.96$ ) than to respond to approach words ( $M = 8.84$ ,  $s = 82.02$ ). However, this main effect was qualified by significant two-way interactions with both norm,  $F(1, 36) = 5.05$ ,  $p = .04$ , and HATH,  $F(1, 36) = 5.36$ ,  $p = .03$ , as well as a three-way interaction involving both of those variables,  $F(1, 36) = 6.30$ ,  $p = .02$ .<sup>3</sup>

To further investigate the three-way interaction, separate regression analyses were conducted for each target type (see Figure 1). For the purposes of the regression analyses, HATH scores were centered and norm was dummy coded (control = +1, egalitarian = -1). The interaction term was then calculated as the product of centered HATH scores and dummy-coded norm. For avoidance words, there was a significant main effect of HATH scores,  $B = .32$ ,  $t(36) = 2.00$ ,  $p = .05$  which was qualified by a significant two-way interaction between HATH scores and norm,  $B = .32$ ,  $t(36) = 2.11$ ,  $p = .04$ . Thus, the extent to which HATH scores predicted activation of avoidance activation was stronger under control conditions but reduced

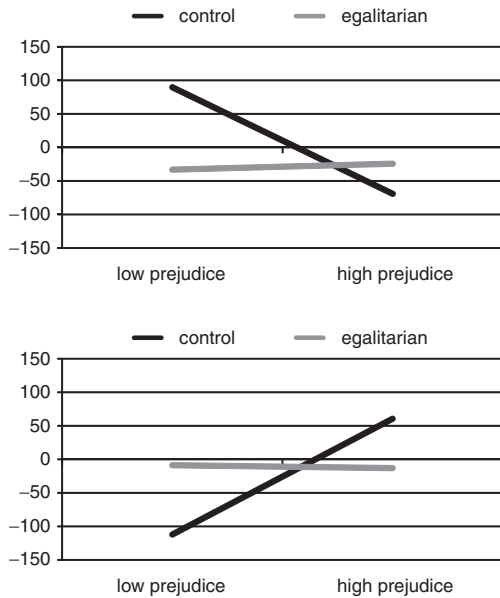


Figure 1. Facilitation (in milliseconds) to approach (top panel) and avoidance (bottom panel) words following gay primes as a function of prejudice against homosexuals and salient norms.

Note: Regression lines based on estimated facilitation scores at  $\pm 2$  standard deviations from the mean HATH score.

among participants in the egalitarian condition. Simple regression analyses indicated that HATH scores significantly predicted facilitation to avoidance words in the control condition,  $B = .48$ ,  $t(18) = 2.29$ ,  $p = .03$ , but not in the egalitarian condition,  $B = -.03$ ,  $t(18) = .11$ ,  $ns$ . The parallel analysis for approach words yielded no significant effects, largest  $B = .26$ ,  $p > .10$ .

**Approach-avoidance versus valence** It should be noted that, in the experiments reported here, the distinction between approach-related and avoidance-related words was somewhat confounded with valence. An independent sample of 15 participants rated the approach and avoidance words on a 7-point scale (1 = very negative, 7 = very positive). As one might expect, average ratings of approach words ( $M = 4.89$ ,  $s = 0.22$ ) were significantly more positive than ratings of

avoidance words ( $M = 3.06$ ,  $s = 0.23$ ),  $t(14) = 18.29$ ,  $p < .001$ ,  $d = 9.78$ . Thus, one could argue that norm salience actually moderated the activation of general attitudes rather than approach and avoidance behavioral representations. However, more detailed analyses argue against this possibility. While approach and avoidance words differed in their overall valence, there was substantial variation within each word type. Closer inspection of the valence ratings indicated that three of the avoidance words (*shun*, *reject*, *refuse*) were rated particularly negatively ( $M = 2.16$ ,  $s = 0.38$ ) whereas the other three (*avoid*, *flee*, *escape*) were rated as relatively neutral ( $M = 4.02$ ,  $s = 0.27$ ). Likewise, three of the approach words (*help*, *assist*, *support*) were rated particularly positively ( $M = 5.73$ ,  $s = 0.40$ ) whereas the other three (*approach*, *near*, *contact*) were rated closer to the neutral point of the scale ( $M = 4.04$ ,  $s = 0.17$ ). Importantly, the relatively neutral subsets of each word type did not significantly differ in their valence,  $t(14) = 0.27$ ,  $p = .79$ ,  $d = .14$ , whereas the more extreme subsets did differ significantly,  $t(14) = 20.61$ ,  $p < .001$ ,  $d = 11.02$ .

The variation in valence within the approach and avoidance words allows a more fine-grained analysis of the effects reported above. Specifically, separate facilitation scores were computed for positive approach, negative avoidance, neutral approach, and neutral avoidance words. These scores were then entered into a three-way mixed-model ANCOVA in which target type (approach vs. avoidance) and target valence (neutral vs. valenced) were repeated-measures variables, salient norm was a between-participants variable, and HATH score was a covariate that was allowed to interact with the other variables. This analysis confirmed that target valence had no significant main or interaction effects (all  $F_s < 1$ ) and that the three-way interaction among target type, salient norm, and HATH remained significant. This suggests that the effects of target type, prejudice, and salient norms were not attributable to differential evaluations of the approach and avoidance words.



## Discussion

The results of Experiment 1 were partially consistent with the hypothesis that activation of approach and avoidance in response to an out-group cue is influenced by out-group prejudice as well as by salient social norms. Under control conditions, participants with more prejudiced attitudes towards homosexuals displayed stronger facilitation to avoidance words after being exposed to the group label "gay". However, this relationship was eliminated among participants for whom egalitarian norms were salient. Thus, it appears that transient cues may counteract chronic avoidance tendencies.

The results for approach activation were less clear. Participants with more prejudiced attitudes towards homosexuals were expected to show less facilitation to approach words following "gay" primes. Although the relationship between prejudice and the activation of approach was in the expected direction (see Figure 1, top panel), it was not statistically significant. One possible explanation is that there were very few participants in the experiment who reported truly positive attitudes towards homosexuals (see note 2). Thus, it is difficult to evaluate hypotheses relating to the influence of positive out-group attitudes.

In interpreting the patterns of approach and avoidance activation, one may be tempted to question whether salient egalitarian norms actually have a *negative* impact on individuals who are lower in prejudice. The predicted facilitation scores plotted for lower and higher prejudiced participants in Figure 1 appear to show that approach activation decreases and avoidance activation increases for lower prejudiced participants when egalitarian norms are salient. Thus, it is important to note that such an interpretation would be flawed. The critical finding from this experiment is that, while prejudice may be a reliable predictor of approach and avoidance activation under control conditions, it ceases to be when egalitarian norms are salient. This is exactly what Figure 1 demonstrates: under control conditions, lower prejudiced participants show greater

approach activation and less avoidance activation (as one might expect based on previous research, e.g., Neumann et al., 2004). However, when egalitarian norms are salient, prejudice no longer predicts facilitation to approach and avoidance words (resulting in the relatively flat regression line). Thus, the pattern of results simply reflects the fact that prejudice is no longer a good predictor of approach and avoidance activation when egalitarian norms are made salient.

## Experiment 2

To further clarify the role of personal attitudes in determining both approach and avoidance activation in intergroup interactions, Experiment 2 provided a conceptual replication of Experiment 1. The primary change was that Experiment 2 involved a target group towards which a greater level of variability in participants' attitudes was expected. The group African-Caribbeans was selected, as this group is characterized by both positive and negative stereotypes in the United Kingdom. A further alteration to the design was the inclusion of a set of control words in the lexical decision task.

## Method

**Participants** Participants were 60 undergraduate students (50 females) at the University of Plymouth who completed this and an unrelated experiment in exchange for partial credit towards a course requirement. Participants were tested individually or in groups of two to five.

**Design** The experiment employed a  $3 \times 2$  mixed-participants design in which target type (approach, avoidance, or control) was varied within-participants and primed norm (egalitarian or control) was manipulated between-participants. Prejudice towards African-Caribbeans (as measured by the 15-item attitude scale developed by Lepore and Brown (1997) to assess racial attitudes among the British population) was also included as a continuous predictor variable.

**Materials and procedure** The procedures of Experiment 2 were similar to those of Experiment 1. Participants were informed that they would be taking part in a number of unrelated tasks, the first of which was a measure of their attitudes towards African-Caribbean people. After completing the questionnaire and an unrelated experiment (lasting 10–15 minutes), participants were given the norm manipulation and finally the approach and avoidance activation measure. This measure included two changes from Experiment 1. First, in addition to the approach- and avoidance-related target words, a set of control words was included (*achieve, cause, manage, force, control, and perform*) along with a further set of nonsense words matched for length and first letter. Second, the prime and control stimuli were the word “black” and the letter string “bbbbb” respectively. All other aspects of the two experiments were the same.

## Results

**Prejudice scores** The racial attitudes scale proved to be sufficiently reliable ( $\alpha = .82$ ); thus after reverse-scoring negatively-worded items, participants’ responses were averaged into a single prejudice score. The theoretical range of scores is from 1 to 7, with higher scores reflecting more negative attitudes. The observed range in this experiment was 2.13 to 5.53 ( $M = 3.61, s = 0.81$ ).

**Approach and avoidance activation** Activation of approach and avoidance related to African-Caribbean people was assessed by comparing participants’ response times (RTs) to trials involving approach and avoidance words following “black” primes to those following “bbbbb” primes. Preparation of the data followed the same steps as outlined in Experiment 1. After removing incorrect responses (265 errors, 5.75% of target word trials) and outliers over 1820ms (62 outliers, 1.43% of correct responses), three facilitation scores were computed. Facilitation scores were computed for approach words, avoidance words, and control words by subtracting the

average RT for each word type following *black* primes from the average RT to the same word type following *bbbbb* primes.

Facilitation scores were analyzed using a two-way mixed-model ANCOVA in which target type (approach, avoidance, or control) was entered as a repeated-measures variable, norm (egalitarian or control) was entered as a between-participants variable, and prejudice scores were entered as a covariate. A model was specified in which the covariate (prejudice scores) was allowed to interact with prime condition to predict each target word type. Results of the ANCOVA revealed significant main effects of target type,  $F(2, 112) = 4.71, p = .01, \eta_p^2 = .08$ , as well as two-way interactions between target type and norm,  $F(2, 112) = 3.17, p = .05, \eta_p^2 = .05$ , and between target type and prejudice,  $F(2, 112) = 4.66, p = .01, \eta_p^2 = .08$ . All of these effects were qualified, however, by a significant three-way interaction involving target type, norm, and prejudice,  $F(2, 112) = 4.07, p = .02, \eta_p^2 = .074$  (see Figure 2).

As in Experiment 1, the three-way interaction was decomposed using separate regression analyses for each target type. Prejudice scores were centered and norm was dummy coded (+1 = control, -1 = egalitarian). For avoidance words, there was a marginally significant main effect of both norm,  $B = .21, t(56) = 1.76, p = .08$  and prejudice,  $B = .22, t(56) = 1.79, p = .08$ , indicating that avoidance was activated more strongly in the control condition than in the egalitarian condition, and more strongly among more highly prejudiced participants. However, both of these were qualified by a significant two-way interaction,  $B = .32, t(56) = 2.66, p = .01$ . Simple regression analyses confirmed that the effect of prejudice was significant in the control condition,  $B = .48, t(28) = 2.88, p = .01$ , but disappeared in the egalitarian condition,  $B = -.14, t(28) = .72, ns$ .

The parallel analysis for approach words produced only a significant main effect of prejudice,  $B = -.31, t(56) = 2.46, p = .02$ , indicating that facilitation to approach words decreased as prejudice increased. No other effects were significant,

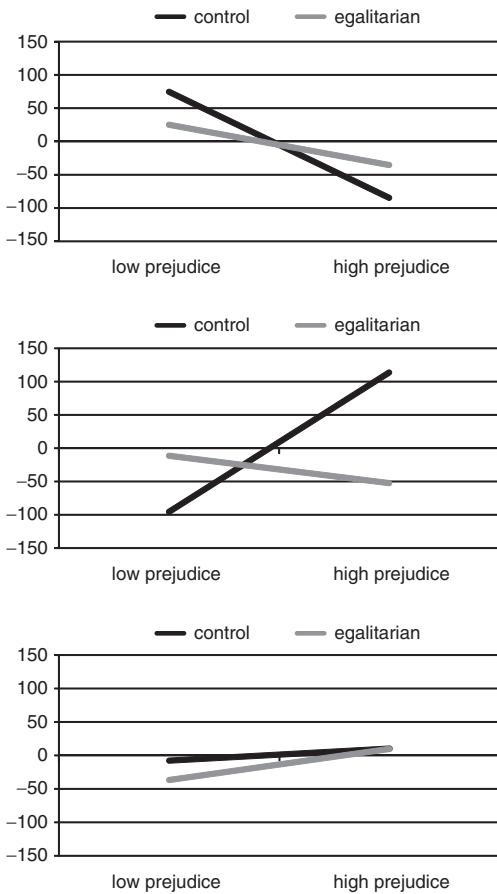


Figure 2. Facilitation (in milliseconds) to approach (top panel), avoidance (middle panel), and control (bottom panel) words following black primes as a function of prejudice against African-Caribbeans and salient norms. Note: Regression lines based on estimated facilitation scores at  $\pm 2$  standard deviations from the mean prejudice score.

all  $ps > .25$ . Finally, the regression analysis for control words produced no significant effects.

**Approach-avoidance versus valence** As in Experiment 1, further analyses explored the role of valence in producing the effects reported above. Using the same distinction described earlier, separate facilitation scores were computed for positive approach, negative avoidance, neutral

approach, and neutral avoidance words. These scores were then entered into a three-way mixed-model ANCOVA in which target type (approach vs. avoidance) and target valence (neutral vs. valenced) were repeated-measures variables, salient norm was a between-participants variable, and prejudice was a covariate that was allowed to interact with the other variables. This analysis confirmed that there were no significant main effects or interactions involving target valence, largest  $F(1, 56) = 2.52, p > .10$ , and that the three-way interaction among target type, prejudice, and norm salience remained significant. As in Experiment 1, this suggests that the differential valence of the approach and avoidance words cannot account for the key effects reported above.

### Discussion

Experiment 2 produced results consistent with the first experiment with respect to activation of avoidance. Under control conditions, prejudice towards African-Caribbeans significantly predicted facilitation to respond to avoidance words after exposure to the group label. However, this relationship disappeared when egalitarian norms were salient—thus, as in Experiment 1, temporarily accessible norms appeared to counteract the influence of more long-standing personal beliefs.

The results from Experiment 2 further indicated a significant relationship between prejudice and activation of approach (unlike Experiment 1). In particular, greater degrees of prejudice corresponded to lower facilitation scores for approach words. However, as in Experiment 1, salient egalitarian norms did not significantly affect this relationship.

### General discussion

These experiments provide new insights into the interplay between personal attitudes and social norms in shaping one's responses towards an out-group. In the absence of other cues relevant to intergroup interactions, negative out-group attitudes appear to be associated with the automatic activation of avoidance. This finding is consistent

with a number of previous studies that suggest a link between out-group prejudice and desire to maximize social distance (Amodio & Devine, 2006; Green, 1972; Stangor et al., 1991). However, the results reported here extend previous findings (e.g., Neumann et al., 2004; Paladino & Castelli, 2008; Seibt et al., 2008) by providing direct evidence that, for prejudiced individuals, the concept of avoidance is *automatically* activated in response to out-group cues. There are, however, some important differences between previous findings and those reported here. First, the present studies demonstrated that explicit attitudes predicted automatic avoidance activation. This finding is in contrast to research by Neumann et al. (2004; see also Cesario et al., 2006) which found that implicit—but not explicit—attitudes predicted approach and avoidance responses. The differences in methodologies (in terms of target groups, participant populations, and measures used) make comparisons difficult. However, it is worth noting that participants in Neumann et al.'s (2004) studies completed the explicit attitude measure at the end of the session, and presumably very shortly after completing the implicit attitude measure and the behavioral measure. The timing of the procedure may have led some participants to censor their responses to the explicit attitude measure. In contrast, participants in the current studies completed the explicit measure at the beginning of the session, and were thus less likely to be sensitive to the nature of the experimental hypotheses. Presumably they should have been less likely to censor their responses, which may have resulted in a more accurate assessment of their attitudes. However, further research will be required to resolve the inconsistency between these studies.

It is also important to note that the current results present a contrasting case to studies reported by Paladino and Castelli (2008). In that research, participants showed evidence of an automatic avoidance response in the absence of pre-existing negative attitudes towards the target group. Participants were assigned to minimal groups and subsequently were facilitated in using an avoidance-related motor responses in categorizing out-group members. In the present research, only participants

with negative attitudes towards the target group tended to show an avoidance response. One possible explanation for this discrepancy is the salience of the intergroup context. In Paladino and Castelli's studies, the task on which approach and avoidance were measured was one that required participants to explicitly categorize targets as in-group or out-group members, thus the intergroup context was likely to be highly salient. In contrast, participants in the present studies were subliminally primed with group labels. To the extent that participants did not view the target group as an important out-group (as may be the case for those who were relatively unprejudiced), the intergroup context would not be salient. This interpretation suggests that the extent to which one perceives a target as an 'out-group member' may further moderate the activation of approach and avoidance responses.

The results of the current research also extend recent research by Zogmeister et al. (2008) in that they highlight the extent to which chronic prejudices and temporarily salient norms interact with each other in producing activation of behavioral representations. Whereas Zogmeister et al. established that making loyalty or equality norms salient had an overall effect on measures of intergroup bias, the present research suggests that such norms may interact with individuals' pre-existing attitudes or beliefs about a target group, so that intergroup bias is only reduced among people with relatively high levels of prejudice.

Furthermore, the current studies highlight the importance of social norms in moderating the relationship between attitudes and behavioral tendencies. In both studies, the association between negative attitudes and avoidance activation was eliminated when egalitarian norms were salient. This finding is consistent with predictions derived from Shah's model of goal-shielding (Shah, 2005; Shah et al., 2002; Shah & Kruglanski, 2002) which suggests that the activation of one goal (e.g., goals consistent with egalitarianism) prevents alternative goals (e.g., avoidance goals) from being activated.

However, the present research also highlights an asymmetry in the malleability of approach and avoidance activation. Positive out-group attitudes

did appear to predict an association between the out-group and approach activation (though not significantly in Experiment 1). However, unlike avoidance, approach activation was relatively insensitive to salient social norms. One might have expected approach-related concepts to become activated even among participants with negative out-group attitudes when they were primed with egalitarianism. Alternatively, one might have posited that participants with positive out-group attitudes should experience a strengthening of approach activation in the egalitarian prime condition. However, neither of these results emerged. One likely explanation is that egalitarian norms may already be chronically salient to individuals with positive out-group attitudes (see Biernat, Vescio, Theno, & Crandall, 1996, for a review). Thus, any attempt to increase the salience of such norms would be redundant. In this case, other norms (e.g., traditionalism, individualism, etc.) might be more likely to alter the relationship between prejudice and approach activation. A second possibility is that approach behavior is the “default” behavioral response to any social target. Thus, in the absence of cues to avoid a particular target, approach responses will always be activated when another person or group is encountered. While out-group membership may be such a cue for prejudiced individuals, it would not be for individuals with relatively positive attitudes.

### *Implications of (temporary and chronic) approach and avoidance responses*

A wealth of research has recently appeared which suggests that goals, once activated, can automatically influence behavior in ways that are consistent with achieving them (e.g., Aarts et al., 2005; Aarts & Dijksterhuis, 2003; Chartrand & Bargh, 1996; Custers & Aarts, 2007a, 2007b). To the extent that approach and avoidance represent goal states, their activation should have important implications for both the quantity and quality of social interactions. In the context of intergroup interactions, there may be profound consequences for improving or deteriorating relations between conflicting groups. As research into intergroup contact has

demonstrated, increasing both the quantity and quality of contact is imperative if intergroup relations are to improve (see Kenworthy, Turner, Hewstone, & Voci, 2005). The results of this research suggest that increasing the frequency that egalitarian norms are salient may have important benefits in this regard. Further research will be needed to confirm this possibility.

However, although the studies presented here are consistent with Cesario et al.’s (2006) contention that out-group cues activate behavioral goals, and with Bargh’s (1990) auto-motive model more generally, the present data do not necessarily reflect such processes. The possibility remains that responses on the approach and avoidance activation measure used in these studies reflect accessibility of some other type of mental representation (e.g., a situation model, as suggested by Jonas & Sassenberg, 2006) rather than a goal per se. More stringent tests, such as those outlined by Forster, Liberman, and Friedman (2007), are needed to confirm whether automatic approach and avoidance activation is actually motivational in nature.

### Notes

1. Participant gender had no significant main or interaction effects in either experiment reported here, and thus will not be discussed further.
2. Interestingly, only three participants obtained a score below the scale’s theoretical midpoint of 3.0. Although norms are not available for UK students, scores in this experiment appear to be unusually high in comparison to other studies using the HATH scale (e.g., Devine, Monteith, Zuwerink, & Elliott, 1991; Klein, Snyder, & Livingston, 2004; Monteith, Devine, & Zuwerink, 1993; Sherman, Stroessner, Conrey, & Azam, 2005—all of which reported samples that were predominantly low in prejudice towards homosexuals).
3. Parallel analyses were carried out separately for each prime type (gay vs. ggg) and confirmed that whereas there were no significant effects on trials involving the control (ggg) primes (all  $F$ s < 1), there was a significant HATH  $\times$  norm  $\times$  target word interaction on trials involving the gay primes,  $F(1, 36) = 6.66, p = .01, \eta_p^2 = .16$ . Thus, to simplify



the presentation of results, only facilitation scores are reported here.

4. As in Experiment 1, parallel analyses were carried out separately for each prime type (black vs. bbbbbb). These confirmed that whereas there were no significant effects on trials involving the control (bbbbbb) primes (all  $F$ s < 1), there was a significant prejudice  $\times$  norm  $\times$  target word interaction on trials involving the gay primes,  $F(2, 112) = 3.72$ ,  $p = .03$ ,  $\eta_p^2 = .06$ .

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